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(71) Applicant (for all designated States except US): **THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK** [US/US]; 116th Street and Broadway, New York, NY 10027 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHANG, Shih-Fu** [—/US]; 560 Riverside Drive, Apt. 18K, New York, NY 10027 (US). **ZHONG, Di** [CN/US]; 55 River Drive South, #2101, Jersey City, NJ 07310 (US). **KUMAR, Raj**

[IN/US]; 64 West 108th Street, #1B, New York, NY 10025 (US). **JAIMES, Alejandro** [CO/US]; 349 East 61st Street, Apt. 2B, New York, NY 10021 (US).

(74) Agents: **TANG, Henry** et al.; Baker Botts LLP, 30 Rockefeller Plaza, New York, NY 10112-0228 (US).

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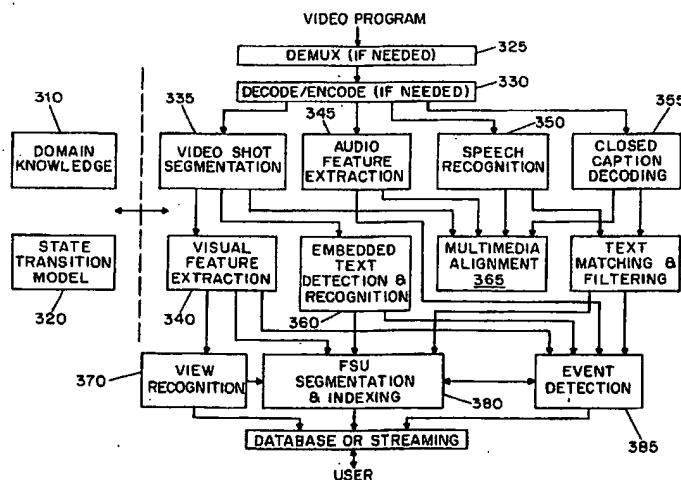
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(54) Title: METHOD AND SYSTEM FOR INDEXING AND CONTENT-BASED ADAPTIVE STREAMING OF DIGITAL VIDEO CONTENT



(57) Abstract: The present invention discloses systems and methods for automatically parsing digital video content into segments corresponding to fundamental semantic units, events, and camera views, and streaming parsed digital video content to users for display and browsing. The systems and methods effectively use the domain-specific knowledge such as regular structures of fundamental semantic units, unique views corresponding to the units, and the predictable state transition rules. The systems and methods also include scene change detection, video text recognition, and view recognition. The results of parsing may be used in a personal video browsing/navigation interface system. Furthermore, a novel adaptive streaming method in which quality levels of video segments are varied dynamically according to the user preference of different segments is disclosed. Important segments are transmitted with full-motion audio-video content at a high bit rate, while the rest is transmitted only as low-bandwidth media (text, still frames, audio).

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